

REMARKS

This is intended as a full and complete response to the Office Action dated April 22, 2004, having a shortened statutory period for response set to expire on July 22, 2004. Please reconsider the claims pending in the application for reasons discussed below.

I. In the Specification

In the Specification, paragraphs [0002], [0004] and [0006] have been amended. The amendments correct typographical errors and make minor grammatical revisions. No new matter is added.

II In the Claims

Claims 21-40 have been examined by the Examiner, and are shown above. Each of claims 21-40 has been rejected by the Examiner.

Claims 22, 23, 32, 39 and 40 have now been cancelled. New claims 41-44 have been added. Claims 21, 24-31, 33-38 and 41-44 are now pending, with claims 21, 26-30, 33-36 and 38 having been amended. Consideration of the pending claims is requested for reasons presented below.

A. Rejection of Claims 21-40 for Double Patenting.

Claims 21-40 have been reviewed by the Examiner, and are shown above. Each of claims 21-40 has been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-57 of U.S. Patent No. 6,702,029. The Examiner has advised that the rejection may be overcome through the filing of a Terminal Disclaimer.

In response, Applicants would note that they have filed new claims 41-44 with this application, and seek to have examination of these claims. Upon review and allowance of these new claims, Applicants will file a Terminal Disclaimer as to pending claims 21, 24-31, 33-38 and 41-44.

Applicants would add that claims 21, 26-30, 33-36 and 38 having been amended.

Independent claim 21 has been amended to clarify the invention. Claim 21 has been clarified to provide that a portion of the liner is expanded into the overlapping casing, resulting in a subsequent increase in the inner and outer diameters of the liner.

Dependent claim 26 has been amended to modify the format of the claim. In addition, the claim is clarified to show that it is the portion of liner to be expanded that is fabricated with a band of relatively soft metal.

Dependent claim 27 has been amended to clarify the invention. In the respect, the step of "further expanding the portion of the liner so as to radially deform a portion of the overlapping casing adjacent to the expanded portion of liner" is affirmatively stated.

Dependent claim 28 has been amended to change "the" to --an--.

Dependent claims 29 and 30 have been amended to depend off of claim 27. In claim 28, deformation of the portion of the expanded casing is plastic deformation. In claim 29, deformation of the portion of the expanded casing is elastic deformation. These amendments do not present new matter. In this respect, Para. [0026] of the Specification provides that in one embodiment, "the portion of casing may also be deformed together with the liner, and the deformation of the casing may be elastic or plastic."

Dependent claim 33 has been amended to change its format. No substantive change is intended by the amendment.

Dependent claim 34 has been amended to modify its format. In addition, the phrase "through a combined running cementing string and tool" was deleted as being unnecessary for patentability.

Dependent claim 35 was amended to correct dependency from claim 33 to claim 34.

Dependent claim 36 was rewritten to clarify the claim. No substantive change is intended by the amendment.

Finally, claim 38 has been amended to modify the nature of the claimed invention. First the step of "providing a liner having a yield strength" has been added. This is not new matter, as paragraph [0022] of the Specification mentions the liner having a "yield" point. Also, the step of "plastically deforming" the liner has been revised

to state that a "radial expansion force" is applied "against an inner diameter of the liner that exceeds the liner's yield strength." This modifies the limitation to show that, in this revised claim, the deformation takes place through a radially outward expansion force. In addition, the step of "continuing to apply a radial expansion force against the inner diameter of the liner so as to cause elastic deformation of an adjacent portion of the surrounding casing" has been added. In addition, the step of "reducing the radial expansion force to allow the deformed adjacent portion of the surrounding casing to relax, thereby providing an interference fit between an overlapping portion of the liner and casing" has been added. It is again noted that the Specification teaches the deformation, not only of the liner, but of the surrounding overlapping casing as well. (See Para. [0026]). The Specification also teaches that expansion of the surrounding casing may be either plastic or merely elastic deformation. (See Para. [0026]). The Specification also teaches that "radial expansion of the casing" may be "up to and exceeding the casing yield point." (See Para. [0066]). Where merely elastic deformation of the casing occurs, the casing will relax back into the liner after the radial expansion force is reduced.

The above amendments are not intended to change the scopes of any of the claims in the parent case, now issued.

B. New Claims 41-44.

As noted, new claims 41-44 have been added. Claim 41 is an independent claim. Claims 42-44 depend from claim 41.

Independent claim 41 provides a method of coupling first and second tubulars in a drilled bore. The first and second tubulars are run into the bore. The first tubular has a first yield strength, while the second tubular has a second yield strength that is less than the first yield strength. Applicants respectfully refer the Examiner to Paras. [0022] and [0026] of the Specification, which mention yield points of the liner and of the casing. In addition, paragraphs [0026] and [0066] describe radial expansion of the surrounding casing in addition to the liner. The first and second tubulars may be, but are not necessarily limited to, casing and liner strings, respectively. The Specification notes that expansion of the casing may create either plastic or merely elastic deformation.

(See Para. [0026]). This provides room for the casing and liner to have different yield strengths. Where the casing undergoes elastic deformation from the same radial force that creates plastic deformation of the liner, the casing has a greater yield strength than the liner.

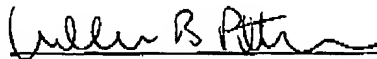
New claim 41 also provides the steps of locating a portion of the second tubular within an overlapping a portion of the first tubular; expanding a portion of the second tubular overlapping the first tubular beyond the yield point of the second tubular so as to cause plastic deformation; continuing to expand the portion of the second tubular within the overlapping first tubular so as to expand an overlapping portion of the first tubular beyond the yield point of the first tubular and to expand the overlapping portion of the first tubular into elastic deformation; and permitting at least a degree of elastic relaxation of the overlapping portion of the first tubular. As discussed in connection with amended claim 38, these steps are not new matter.

Dependent claim 42 expressly provides that the first tubular is a casing, and the second tubular is a liner. Dependent claim 43 states that the step of expanding a portion of the liner into an overlapping portion of the casing results in a hanging of the liner. Dependent claim 44 provides that the step of expanding a portion of the liner into an overlapping portion of the casing is accomplished by actuating and rotating a rolling expander tool. These steps and limitations are not new matter.

III. Conclusion

In conclusion, Applicant respectfully requests consideration of pending claims 21, 24-31, 33-38 and 41-44. Having addressed all issues set out in the Office Action, Applicant respectfully submits that the claims are in condition for allowance, subject to the Terminal Disclaimer discussed above.

Respectfully submitted,



Peter L. Brewer
Registration No. 41,636
William B. Patterson
Registration No. 34,102
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Direct Dial: (713) 577-4827
Facsimile: (713) 623-4846

Attorney for Applicant(s)

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